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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,752	03/26/2004	William Gross	IDEALAB.043A	9078

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EXAMINER	
PAINTER, BRANON C	

ART UNIT	PAPER NUMBER
3609	

NOTIFICATION DATE	DELIVERY MODE
07/24/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jcartee@kmob.com
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Office Action Summary	Application No.	Applicant(s)	
	10/810,752	GROSS, WILLIAM	
	Examiner	Art Unit	
	Branon C. Painter	3609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>06/21/2004</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 06/21/2004 was filed after the mailing date of the non-provisional application on 03/26/2004. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings

2. The drawings are objected to because in the force labeled in Fig. 2 is " F_f ", and the force in Fig. 3 is " F_p ". To the examiner's best understanding, the labels should be reversed so that Fig. 2 shows " F_p " and Fig. 3 shows " F_f ". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing

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date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

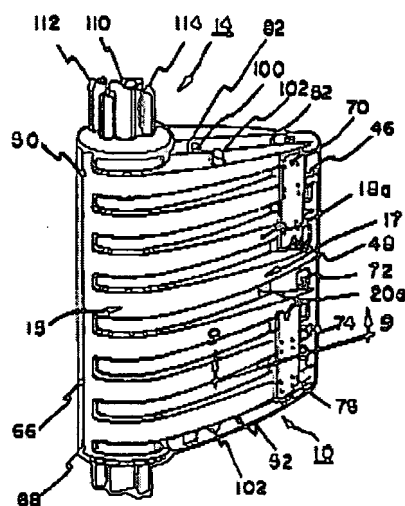
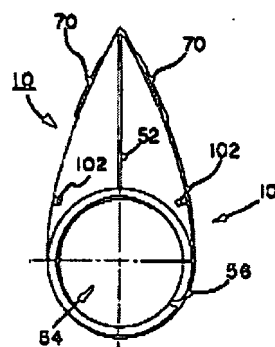
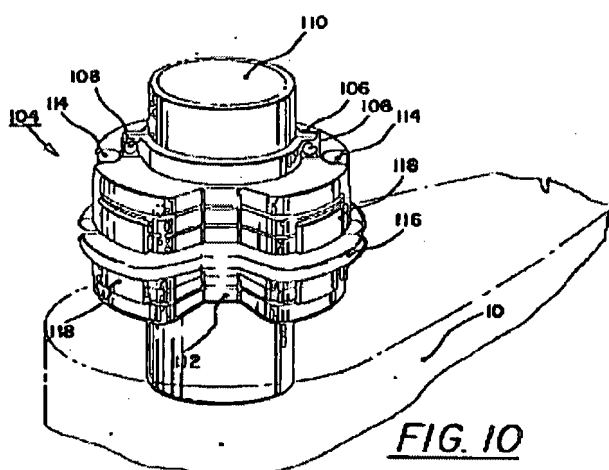
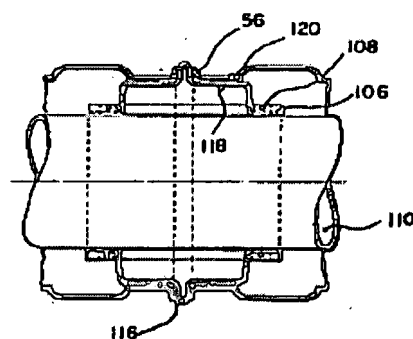
5. Claims 1-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hale (U.S. Patent No. 4,171,674) in view of Gordin et al. (U.S. Patent No. 5,398,478), and further in view of Hamilton (U.S. Patent No. 2,738,039).
6. Regarding claims 1-4:

- a. Hale discloses a fairing apparatus with the following structure: a hollow elongate fairing sleeve...rotatably secured to a support member, the hollow elongate sleeve having a shape configured to reduce aerodynamic drag force acting on the support member ("fairing" 10, Figs. 1 and 4) [claim 1]; wherein the fairing is secured to the support by at least one bearing joint ("collar" 104 with "bearing pads" 118, Figs. 10 and 12) [claim 2]; wherein the fairing has a first and second end with accompanying bearing joints at each end ("bearing pads" 118, Fig. 12) [claim 3]; and wherein the fairing has a lateral support structure inside the fairing sleeve comprising a plurality of bearings ("collar" 104 with "bearing pads" 118, Fig. 12) [claim 4].
- b. The examiner notes that, while Hale recommends the use of his fairing in a watery medium, it is equally applicable to an open-air environment. Both air and water are fluids, and the drag on an object in either fluid is lessened if it has an aerodynamic shape (such as that of Hale's fairing). Furthermore, it is notoriously well-known in the fluids art to interchange testing in a wind tunnel and testing in a water tank when determining the Reynolds number of an object, using only a scaling factor to account for water's greater kinematic viscosity.
- c. Hale does not expressly disclose that the support member to which the fairing apparatus is connected is a vertical member anchored in a foundation and subjected to an aerodynamic drag force [claim 1].

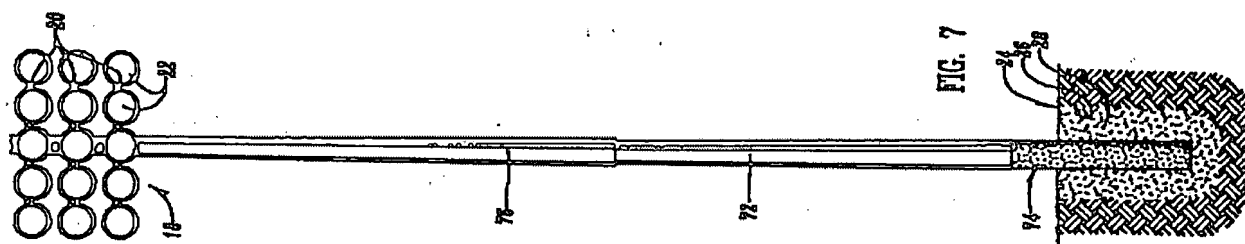
- d. Gordin et al. discloses a vertical support member anchored in a foundation and subjected to an aerodynamic drag force ("pole sections" 72 and 76 with "base" 74 and "foundation" 28, Fig. 7) [claim 1]. Attaching the fairing of Hale to a vertical support member like the one taught by Gordin et al. reduces the wind drag on the support member, allowing the member to withstand more significant drag forces due to wind velocities.
- e. The examiner further notes motivation for combining the references as set forth in Hamilton: "If desired, the principal shells 51 may be enclosed in fairings of low aerodynamical resistance which are rotatable about the shells so as to offer minimum resistance to wind" (column 4, lines 2-5). The "principal shells" of Hamilton are poles, or vertical supports.
- f. Moreover, the examiner notes that the vertical support element of Gordin et al. and the fairing of Hale have dimension ranges which overlap (for instance, the pole of Fig. 7 has a diameter of 13.5 in. (34.29 cm.) (Gordin et al., column 11, line 50), while the fairing has a preferred diameter range from 20 cm. to 1 m. (Hale, column 2, lines 11-15). While these ranges may be larger than a typical pole for street lights or traffic signals, the examiner notes that a change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).
- g. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the motivation supplied by Hamilton to modify the vertical support element of Gordin et al. by adding the fairing of Hale in

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order to decrease the wind resistance and resulting drag force experienced by the support element.

FIG. 1FIG. 4FIG. 10FIG. 12

Reproduced from U.S. Patent No. 4,171,674

FIG. 7

Reproduced from U.S. Patent No. 5,398,478

7. Regarding claims 6 and 8-11:

- a. Hale discloses a fairing apparatus with the following structure: an elongate fairing sleeve having a first axis, covering a portion of a support member, configured to rotate around a support member on the first axis, and shaped to reduce aerodynamic drag force acting on the support member ("fairing" 10, Figs. 1 and 4) [claim 6]; wherein the covered portion of the vertical support has a greater drag coefficient than the fairing ("fairing" 10, Fig. 1) [claim 8]; wherein the fairing has upper and lower ends, with the lower end displaced from the foundation by a first height ("fairing" 10, Fig. 1) [claim 10]; and wherein there is included a safety shield closer to the foundation than the fairing ("collar" 104 at the bottom of "fairing" 10, Figs. 10 and 12) [claim 11].
- b. Hale does not expressly disclose that the support member to which the fairing apparatus is connected is a vertical member anchored in a foundation and subjected to an aerodynamic drag force [claim 9].
- c. Gordin et al. discloses a vertical support member anchored in a foundation and subjected to an aerodynamic drag force ("pole sections" 72 and 76 with "base" 74 and "foundation" 28, Fig. 7) [claim 9]. Attaching the fairing of Hale to a vertical support member like the one taught by Gordin et al. reduces the wind drag on the support member, allowing the member to withstand more significant drag forces due to wind velocities.

8. Regarding claims 1, 5, 6 and 7:

- a. Hale discloses a fairing apparatus with the following structure: a hollow elongate fairing sleeve...rotatably secured to a support member, the hollow elongate sleeve having a shape configured to reduce aerodynamic drag force acting on the support member ("fairing" 10, Figs. 1 and 4) [claim 1]; and an elongate fairing sleeve having a first axis, covering a portion of a support member, configured to rotate around a support member on the first axis, and shaped to reduce aerodynamic drag force acting on the support member ("fairing" 10, Figs. 1 and 4) [claim 6].
- b. Hale does not expressly disclose that the support member to which the fairing apparatus is connected is a vertical member anchored in a foundation and subjected to an aerodynamic drag force [claim 1], that the support member has a tapered end structure, or that the fairing sleeve has a cupped support receptacle fit to receive the tapered end [claims 5 and 7].
- c. Gordin et al. discloses: a vertical support member anchored in a foundation and subjected to an aerodynamic drag force ("pole section" 72 with "base" 74 and "foundation" 28, Fig. 7) [claim 1]; wherein the support member has a tapered end and is received by a member with a cupped support receptacle ("pole section" 72 received by "pole section" 76, Fig. 7). Attaching the fairing of Hale to a vertical support member like the one taught by Gordin et al. reduces the wind drag on the support member, allowing the member to withstand more significant drag forces due to wind velocities. Furthermore, modifying the fairing of Hale to include a cupped receiving structure as taught

by Gordin et al. allows the fairing to slip over the support member and eliminates the need for bearings in the fairing, reducing manufacturing time and cost.

- d. The examiner further notes motivation for combining the references as set forth in Hamilton: "If desired, the principal shells 51 may be enclosed in fairings of low aerodynamical resistance which are rotatable about the shells so as to offer minimum resistance to wind" (column 4, lines 2-5). The "principal shells" of Hamilton are poles, or vertical supports.
- e. Moreover, the examiner notes the ability of the cupped receiving structure to rotate when coupled with the tapered end support member: "As one of the major advantages of the present invention, even after this preliminary installation, the pole section 66 can virtually be adjusted 360° around base 60" (column 12, lines 4-7). While this quote refers to the embodiment in Fig. 6 (not shown), it is obvious that the same would apply to the coupling shown in Fig. 7.
- f. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the motivation supplied by Hamilton to modify the vertical support element of Gordin et al. by adding the fairing of Hale in order to decrease the wind resistance and resulting drag force experienced by the support element. Furthermore, it would have been obvious to a person of ordinary skill in the art to use the motivation supplied by Hamilton to modify the fairing of Hale by incorporating a cupped support receptacle as

taught by Gordin et al. in order to eliminate the need for bearings in the fairing, saving both materials and manufacturing cost.

9. Regarding claims 6 and 12-17:

- a. Hale discloses a fairing apparatus with the following structure: the structure of claim 6 as detailed above; wherein the fairing is rotatably secured to the support by at least one bearing joint ("collar" 104 with "bearing pads" 118, Figs. 10 and 12) [claim 15]; wherein the fairing has a first and second end with accompanying bearing joints at each end ("bearing pads" 118, Fig. 12) [claim 16]; and wherein the fairing has a lateral support structure inside the fairing sleeve comprising a plurality of bearings ("collar" 104 with "bearing pads" 118, Fig. 12) [claim 17].
- b. Hale does not expressly disclose that the elongate support member to which the fairing apparatus is connected has a circular [claim 12], rectangular [claim 13], or square [claim 14] cross-section.
- c. Gordin et al. discloses a vertical elongate support member whose embodiments include a circular cross-section (Fig. 24A) [claim 12] and a square [claim 14] rectangular [claim 13] cross-section (Fig. 24B). Attaching the fairing of Hale to a vertical support member like the one taught by Gordin et al. reduces the wind drag on the support member, allowing the member to withstand more significant drag forces due to wind velocities.

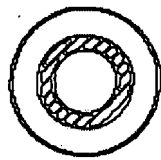


FIG. 24A

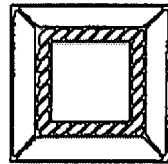


FIG. 24B

Reproduced from U.S. Patent No. 5,398,478

10. Regarding claims 18-24:

- a. Hale discloses a fairing apparatus with the following structure: an elongate support member, an elongate fairing sleeve having a longitudinal axis and covering a portion of the support member, and means for rotatably attaching the fairing sleeve to the support member ("fairing" 10 with "collar" 104, Figs. 1, 4, and 10) [claim 18]; wherein the covered portion of the vertical support has a greater drag coefficient than the fairing ("fairing" 10, Fig. 1) [claim 19]; wherein the fairing has upper and lower ends, with the lower end displaced from the foundation by a first height ("fairing" 10, Fig. 1) [claim 23]; and wherein there is included a safety shield closer to the foundation than the fairing ("collar" 104 at the bottom of "fairing" 10, Figs. 10 and 12) [claim 24].
- b. Hale does not expressly disclose that the support member to which the fairing apparatus is connected has a rectangular [claim 20], or square [claim 21] cross-section, or that it is a vertical member anchored in a foundation and subjected to an aerodynamic drag force [claim 22].
- c. Gordin et al. discloses a vertical support member with a square [claim 21] rectangular [claim 20] cross-section (Fig. 24B), anchored in a foundation and

subjected to an aerodynamic drag force ("pole sections" 72 and 76 with "base" 74 and "foundation" 28, Fig. 7) [claim 22]. Attaching the fairing of Hale to a vertical support member like the one taught by Gordin et al. reduces the wind drag on the support member, allowing the member to withstand more significant drag forces due to wind velocities.

11. Regarding claim 25:

- a. Hale discloses a fairing sleeve covering at least a portion of a support member and configured to rotate around the support member ("fairing" 10 with "collar" 104 and "bearing pads" 118, Figs. 1, 4, 10, and 12), and further discloses a plurality of fairings along the length of a support member ("fairings" 10, Fig. 11) [claim 25].
- b. Hale does not expressly disclose that the support member is comprised of two components, a first and second elongate support member [claim 25].
- c. Gordin et al. discloses a vertical support member comprised of a first elongate support member ("pole section" 72, Fig. 7) and a second elongate support member ("pole section" 76, Fig. 7) attached to one another [claim 25]. Attaching the fairing of Hale to a vertical support member like the one taught by Gordin et al. reduces the wind drag on the support member, allowing the member to withstand more significant drag forces due to wind velocities.
- d. The examiner further notes that since Hale discloses a plurality of fairings along the length of a support member, and since Gordin et al. teaches a

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support member made of two distinct parts (a first and second elongate support member), then it follows that a first fairing sleeve would cover a portion of the first elongate support member, and a second fairing sleeve would cover a portion of the second elongate support member.

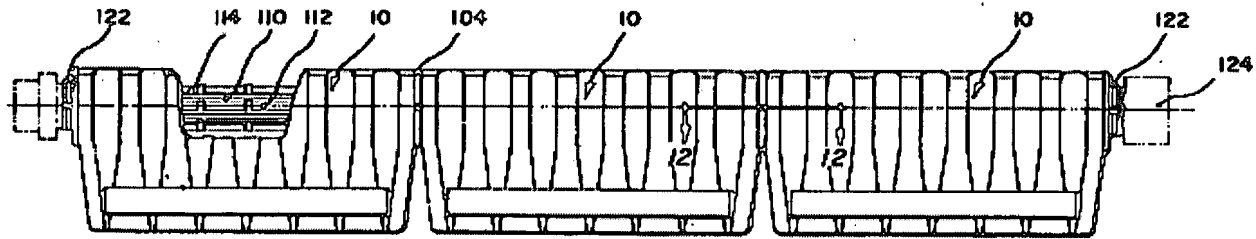


FIG. 11

Reproduced from U.S. Patent No. 4,171,674

12. Regarding claims 26-29:

- a. The combination renders the claimed method steps obvious since such would be the logical manner of using the combination.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Branon C. Painter whose telephone number is (571) 270-3110. The examiner can normally be reached on Mon-Fri 7:30AM-5:00PM, alternate Fridays off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Victor Batson can be reached on (571) 272-6987. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Victor Batson
Supervisory Patent Examiner
Art Unit 3609

Branon Painter
06/13/2007